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BEFORE THE

Federal Communications Commission

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Co-Channel Protection Criteria	)	PR Docket No. 93-60
for Part 90, Subpart S Stations	)	RM-8028
Operating Above 800 MHz	)	

To: The Commission

REPLY COMMENTS OF THE COMMONWEALTH EDISON COMPANY

Commonwealth Edison Company (CECo), by its attorneys and pursuant to Section 1.415 of the Rules and Regulations of the Federal Communications Commission (Commission or FCC), respectfully submits these Reply Comments in response to the Notice of Proposed Rule Making adopted by the Commission on March 11, 1993 in the above-styled proceeding.1/

I. INTRODUCTION

1. CECo is one of the nation's major utility companies and the largest in Illinois. Its operating territory encompasses the northern fifth of the State of Illinois (over 11,000 square miles), including the Chicago

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1/ Notice of Proposed Rule Making (FCC 93-140) released

metropolitan area. CECo generates electricity and distributes it to over 3.2 million customers. In addition to its conventional generation of power, CECo is the nation's largest provider of nuclear generated power, with 12 nuclear reactors serving customers throughout its operating territory. CECo is licensed to operate a 900 MHz trunked, wide-area Industrial/Land Transportation (I/LT) system throughout its service area. CECo is concerned that this system be provided sufficient interference protection from co-channel licensees because of the critical nature of the communications that are transmitted on this system.

2. CECo filed a Statement in Support of the National Association of Business and Educational Radio, Inc. Petition of Rule Making indicating that non-SMR licensees should be afforded at least an equal interference protection standard from co-channel systems as SMR systems enjoy.2/ In a wide-area system configuration, such as CECo's, the need for interference protection is extremely important to ensure complete operational coverage of the system throughout CECo's extensive service area. Highly reliable communications are critical to ensure the efficient

2/ See Statement in Support filed by CECo on August 12.

provision of electric and nuclear power service, and to promptly respond to reports of outage and other emergencies. Land mobile communications are indispensable to the maintenance, repair and emergency preparedness activities associated with CECo's distribution system, nuclear generating plants, and major transmission lines.

3. As the licensee of critical 900 MHz facilities operating at nuclear power plants, CECo supports the Commission's proposal in this proceeding which would provide applicants and licensees in the non-SMR categories, such as CECo, the same higher level of co-channel interference protection (the 40/22 dBu standard) that the Part 90 - Subpart S rules currently afford to systems operating in the Specialized Mobile Radio (SMR) category. Likewise, CECo supports the comments which favors the Longley-Rice/Technote 101 propagation prediction methodology over the traditional R-6602 methodology for the calculation of co-channel mileage separation standards. CECo believes that the Technote 101 model is more suitable for 800/900 MHz land mobile propagation predictions and the resulting computation of service contours.

II. REPLY COMMENTS

4. Like most commenters, CECo is pleased to see in the Notice that the Commission has proposed to extend the stricter co-channel protection standard to all non-SMR categories. As many commenters recognized, the proposed 40/22 dBu standard is consistent with the Commission's finding in PR Docket No. 90-34 that the 40/30 dBu standard

actual propagation in areas of irregular terrain. Consequently, it inadequately protects existing co-channel systems from applicants who seek to "engineer-in" new systems. CECo agrees with SoCalEd and TU that the Commission should adopt the more accurate propagation model, Technote 101, for calculation of the relevant contours.

6. CECo's practical experience with 800/900 MHz systems in the Chicago, Illinois area demonstrates that the Commission's R-6602 methodology is often extremely inaccurate in predicting actual propagation. The R-6602 methodology is highly generalized because it is essentially a transposition of UHF broadcast propagation interpreted for land mobile use, and it relies on a "flat earth" model of RF propagation. Specifically, the R-6602 methodology averages the terrain along each radial to determine an average height above average terrain (HAAT), and then models the propagation based on this average HAAT value. Use of this "averaging" methodology often results in extremely smooth, rounded contours, regardless of the actual intervening terrain or environments that may or may not be conducive to RF propagation over long distances. While the R-6602 model may adequately serve the Commission's and applicants'

purposes where the terrain is indeed flat, it is wholly inadequate for describing the true service area of systems operating in irregular terrain.

7. CECo believes that use of the Longley-Rice/Technote 101 methodology would more accurately address the Commission's concern with co-channel protection and spectrum utilization. The Technote 101 model makes use of modern computer capabilities that permit the analysis of digitized terrain data. Modern private land mobile systems should be using a modern, readily available computer-capable methodology to help determine co-channel protection criteria rather than the less accurate methodology behind the R-6602 curves.

8. Further, CECo notes that the R-6602 methodology only works with HAAT not exceeding 5,000 feet. However, heights as much as 10,000 feet may be found in other parts of the country. Before digitized terrain data was available along with associated computer capabilities, use of the R-6602 methodology was a necessary expedient. Current computer capabilities, and the availability of digitized terrain data, suggest that the time has come to transition

to Technote 101 to obtain more accurate management and use of the spectrum resource, especially where there are intervening terrain features.

III. CONCLUSION

9. CECo operates, as do the majority of licensees in the 800/900 MHz I/LT category, extensive and critical communications systems essential to the transmission and distribution of energy to the public. The infrastructure

WHEREFORE, THE PREMISES CONSIDERED, the Commonwealth Edison Company urges the Commission to take action in a manner consistent with the views expressed therein.

Respectfully submitted,

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